

In re Patent Application of:  
**PARSCHE**  
Serial No. 10/694,148  
Filing Date: **October 27, 2003**

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**REMARKS**

Claims 1-29 remain in this application. Claims 1, 11 and 20 are amended. No claims are cancelled.

Applicant thanks the Examiner for the detailed study of the application and prior art. Applicant files a Request for Continued Examination (RCE) to have this After Final Amendment considered by the Examiner. Applicant contends that this case is in condition for allowance.

Applicant would like to draw the Examiner's attention particularly to FIGS. 1 and 2 showing that the claimed antenna is formed as a radiating, spherically configured ring element formed as a substantially solid spherical sector having about a one-half wavelength circumference and natural resonance for obtaining uniform current distribution and enhancing the gain relative to the size of the antenna. This radiating ring element could be about twice its height and a one-third pie sector of a sphere as shown in FIG. 1 as a non-limiting example. The radiating ring element as claimed has a uniform current distribution and enhanced gain relative to its size and could have forced resonance while maintaining high efficiency. It can permit a variometer feed for varying the feed impedance with uniform current distribution and minimize any currents and proximity effects.

This After Final Amendment stresses that this radiating ring element is spherically configured and formed as a substantially solid spherical sector as shown in FIGS. 1 and 2.

As to the cited U.S. Patent No. 6,812,902 to Rossman et al. (hereinafter "Rossman"), and used by the Examiner to

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reject claim 1 as anticipated, and claims 2 and 3 as obvious over Rossman, and other claims 4-6 and 11-15 as obvious over Rossman in view of U.S. Patent No. 6,600,451 to Mimura et al. (hereinafter "Mimura"), Applicant notes that Rossman teaches opposite from the claimed invention. Rossman teaches a planar ring element to form a disk-shaped, two-antenna assembly, as clearly shown in the Rossman drawings. This structure is clearly described in column 4, starting at line 52 and continuing onto line 67 as follows:

"FIG. 4 shows a thin and disk-shaped two antenna assembly 100 in accordance with the invention that includes a ring antenna 101 and a linear monopole antenna 102 that is located concentrically within ring antenna 101. Monopole antenna 102 can be characterized as a terrestrial top-loaded metal disk monopole antenna that is shunt matched.

The ring antenna's radiating element 103 comprises a wide-trace, non-meanderline, ring-shaped metal pattern. The top portion of antenna assembly 100 includes two centrally-located and half-octagonal metal shields 104 and 105 that operate to shield electronic components (not shown) that are contained within a volume of antenna assembly 100 that is under metal shields 104, 105.

Monopole antenna 102 is made up of two generally parallel metal radiating elements 120 and 121 whose top ends support a metal disk 122."

FIG. 5 discloses a similar structure, where the flat plate forming the ring element is in the shape of a narrow trace, meandering or zig-zag, metal resonant ring 25 having

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four generally identical 90 degree sections. Similar embodiments are shown in FIGS. 9, 10 and 11. Thus, the dielectric ring is planar configured and has an outer diameter, inner diameter, and ring-shaped and generally planar top surface, and ring-shaped and generally planar bottom surface with a disk-shaped metal ground plane, and a ring-shaped metal radiating element. The radiating elements clearly form a ring, for example, in FIG. 4 as planar element 103. Although the claimed invention as presented in this After Final Amendment may use the word "ring," it should be understood that the claimed invention is opposite because it is not planar as in Rossman. In the claimed invention, a radiating spherically configured ring element is formed as a substantially solid spherical sector. Thus, Rossman teaches opposite from the claimed invention and teaches a planar ring instead of a spherically configured ring that is a sector.

The ring element formed as a substantially solid spherical sector is opposite from the cited Mimura, which is specifically directed to a ring resonator antenna formed from two conducting lines arranged in a ring in a TEM-mode transmission line. The end of one of the lines is connected to the end of the other line with opposite polarity. Thus, Mimura is directed toward the type of antenna noted in the Background of the Invention section of the instant applicant.

As explained, this prior art uses a wire dipole or loops of coil, some of them based on Maxwell or Wheeler antenna designs. As shown in FIG. 1 of Mimura, the TEM-mode transmission lines forms a ring or loop, similar to the prior art noted in the Background of the Invention section of the instant applicant.

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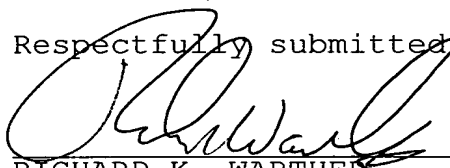
Thus, the combination of Rossman and Mimura would suggest a ring antenna element formed by conducting lines and configured in a planar configuration, where the transmission lines would take the place of the flat planar ring 103 shown in FIG. 4 of Rossman.

It is evident that the claimed invention as now presented in this After Final Amendment is patentable over the cited prior art.

Applicant contends that the present case is in condition for allowance and respectfully requests that the Examiner issue a Notice of Allowance and Issue Fee Due.

If the Examiner has any questions or suggestions for placing this case in condition for allowance, the undersigned attorney would appreciate a telephone call.

Respectfully submitted,



RICHARD K. WARTHER  
Reg. No. 32,180  
Allen, Dyer, Doppelt, Milbrath  
& Gilchrist, P.A.  
255 S. Orange Avenue, Suite 1401  
Post Office Box 3791  
Orlando, Florida 32802  
Phone: 407-841-2330

**CERTIFICATE OF MAILING**

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: **MAIL STOP AF, COMMISSIONER FOR PATENTS, P.O. BOX 1450, ALEXANDRIA, VA 22313-1450**, on this 7<sup>th</sup> day of March, 2006.

